

**EX.NO:01****BIGGEST OF THREE NUMBER****XML:**

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/textview"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Enter Three Numbers "
        android:textSize="24sp"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="20dp"/>

    <EditText
        android:id="@+id/first"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/textview"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="20dp"
        android:ems="10"
        android:inputType="number"
        android:minHeight="48dp"/>

    <EditText
        android:id="@+id/second"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/first"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="20dp"
        android:ems="10"
```

```
    android:inputType="number"
    android:minHeight="48dp"
  />

<EditText
    android:id="@+id/third"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/second"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="20dp"
    android:ems="10"
    android:inputType="number"
    android:minHeight="48dp" />

<Button
    android:id="@+id/buttongreat"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/third"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="25dp"
    android:text="Submit"/>

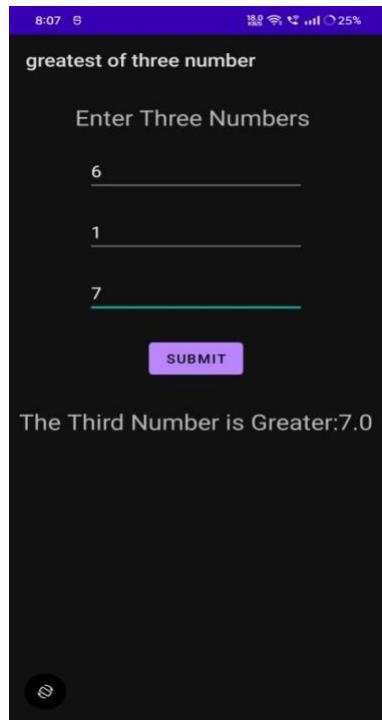
<TextView
    android:id="@+id/result"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/buttongreat"
    android:layout_centerHorizontal="true"
    android:textSize="24sp"
    android:layout_marginTop="30dp"/>

</RelativeLayout>
```

## **JAVA:**

```
package com.example.greatestofthreenumber;
import androidx.appcompat.app.AppCompatActivity;
import android.annotation.SuppressLint;
import android.os.Bundle;
import android.view.View;
import android.widget.*;
public class MainActivity extends AppCompatActivity {
    TextView r;
    EditText firstnum,secondnum,thirdnum;
    Button bt;
    Double a,b,c;
    @SuppressLint("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        firstnum=(EditText) findViewById(R.id.first);
        secondnum=(EditText) findViewById(R.id.second);
        thirdnum=(EditText) findViewById(R.id.third);
        bt=(Button) findViewById(R.id.buttongreat);
        r=(TextView) findViewById(R.id.result);
        bt.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                a=Double.parseDouble(firstnum.getText().toString());
                b=Double.parseDouble(secondnum.getText().toString());
                c=Double.parseDouble(thirdnum.getText().toString());
                if(a>=b && a>=c){
                    r.setText("The First Number is Greater:"+a);
                }
                else if(b>=a && b>=c){
                    r.setText("The Second Number is Greater:"+b);
                }
                else if(c>=a && c>=b){
                    r.setText("The Third Number is Greater:"+c);
                }
            }
        });
    }
}
```

## OUTPUT:



**EX.NO.:02**

**PERSONAL DETAILS USING GUI COMPONENTS**

**XML:**

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/textView4"
        android:layout_width="371dp"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentBottom="true"
        android:layout_marginStart="28dp"
        android:layout_marginLeft="28dp"
        android:layout_marginEnd="12dp"
        android:layout_marginRight="12dp"
        android:layout_marginBottom="219dp"
        android:text="Address:AM Jain College, Meenambakkam, | Chennai - 600114"
        android:textAlignment="center"
        android:textSize="24sp" />

    <TextView
        android:id="@+id/textView5"
        android:layout_width="362dp"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentBottom="true"
        android:layout_centerHorizontal="true"
        android:layout_marginStart="22dp"
```

```
    android:layout_marginLeft="22dp"
    android:layout_marginEnd="27dp"
    android:layout_marginRight="27dp"
    android:layout_marginBottom="171dp"
    android:text="Email Id: xyz@gmail.com"
    android:textAlignment="center"
    android:textSize="24sp" />
```

```
<TextView
    android:id="@+id/textView3"
    android:layout_width="367dp"
    android:layout_height="66dp"
    android:layout_alignParentStart="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentEnd="true"
    android:layout_alignParentRight="true"
    android:layout_alignParentBottom="true"
    android:layout_marginStart="32dp"
    android:layout_marginLeft="32dp"
    android:layout_marginEnd="12dp"
    android:layout_marginRight="12dp"
    android:layout_marginBottom="287dp"
    android:text="Professor - Mobile App Dev."
    android:textAlignment="center"
    android:textSize="24sp" />
```

```
<ImageView
    android:id="@+id/imageView3"
    android:layout_width="150dp"
    android:layout_height="115dp"
    android:layout_alignParentEnd="true"
    android:layout_alignParentRight="true"
    android:layout_alignParentBottom="true"
    android:layout_marginEnd="13dp"
    android:layout_marginRight="13dp"
    android:layout_marginBottom="510dp"
    android:src="@drawable/logo2" />
```

```
<View
    android:id="@+id/view"
    android:layout_width="wrap_content"
    android:layout_height="4dp"
    android:layout_alignParentBottom="true"
    android:layout_marginBottom="487dp"
    android:background="#4444" />

<TextView
    android:id="@+id/textView2"
    android:layout_width="278dp"
    android:layout_height="wrap_content"
    android:layout_alignParentStart="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentEnd="true"
    android:layout_alignParentRight="true"
    android:layout_alignParentBottom="true"
    android:layout_marginStart="52dp"
    android:layout_marginLeft="52dp"
    android:layout_marginEnd="81dp"
    android:layout_marginRight="81dp"
    android:layout_marginBottom="401dp"
    android:text="Dr.REVATHI S"
    android:textAlignment="center"
    android:textSize="24sp"
    android:textStyle="bold" />

<TextView
    android:id="@+id/textView7"
    android:layout_width="190dp"
    android:layout_height="135dp"
    android:layout_alignParentBottom="true"
    android:layout_marginEnd="35dp"
    android:layout_marginRight="35dp"
    android:layout_marginBottom="496dp"
    android:layout_toStartOf="@+id/imageView3"
    android:layout_toLeftOf="@+id/imageView3"
    android:text="A M JAIN COLLEGE"
    android:textColor="#051CE6"
    android:textSize="36sp"
```

```
        android:textStyle="bold" />
</RelativeLayout>
```

## **JAVA:**

```
package com.example.visitingcard;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
}
```

## **OUTPUT:**



**EX.NO.:03****RADIO BUTTON****XML:**

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <TextView

        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Select Your Subject?"
        android:textStyle="bold"
        android:layout_marginHorizontal="10dp"
        android:textSize="20sp" />

    <RadioGroup
        android:layout_marginTop="50dp"
        android:id="@+id/groupradio"
        android:layout_marginLeft="10dp"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content">

        <RadioButton
            android:layout_width="fill_parent"
            android:layout_height="wrap_content"
            android:id="@+id/radi01"
            android:text="DBMS"
            android:textSize="20sp"/>

        <RadioButton
            android:layout_width="fill_parent"
            android:layout_height="wrap_content"
            android:id="@+id/radio2"
            android:text="C/C++ programming"
            android:textSize="20sp"/>
```

```
<RadioButton
    android:layout_width="fill_parent"
    android:layout_height="wrap_content"
    android:id="@+id/radio3"
    android:text="Data Structure"
    android:textSize="20sp"/>

<RadioButton
    android:id="@+id/radio4"
    android:layout_width="fill_parent"
    android:layout_height="wrap_content"
    android:layout_marginEnd="49dp"
    android:layout_marginBottom="239dp"
    android:text="Algorithm"
    android:textSize="20sp" />

</RadioGroup>

<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Submit"
    android:id="@+id/submit"
    android:textStyle="bold"
    android:textSize="20sp"
    android:layout_marginTop="250dp"
    android:layout_marginLeft="180dp"/>

<Button
    android:id="@+id/clear"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginLeft="20dp"
    android:layout_marginTop="250dp"
    android:text="Clear"
    android:textSize="20sp"
    android:textStyle="bold" />
</RelativeLayout>
```

## **JAVA:**

```
package com.example radiobutton;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.RadioGroup;
import android.widget.RadioButton;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    private RadioGroup radioGroup;
    Button submit, clear;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        submit = (Button) findViewById(R.id.submit);
        clear = (Button) findViewById(R.id.clear);
        radioGroup = (RadioGroup) findViewById(R.id.groupradio);
        radioGroup.clearCheck();
        radioGroup.setOnCheckedChangeListener(new RadioGroup.OnCheckedChangeListener() {
            @Override
            public void onCheckedChanged(RadioGroup radioGroup, int checkedid) {
                RadioButton radioButton = (RadioButton) radioGroup.findViewById(checkedid);
            }
        });
        submit.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                int selectedid = radioGroup.getCheckedRadioButtonId();
                if (selectedid == -1) {
                    Toast.makeText(MainActivity.this, "No answer has been selected", Toast.LENGTH_SHORT).show();
                } else {
                    RadioButton radioButton = (RadioButton) radioGroup.findViewById(selectedid);
                }
            }
        });
    }
}
```

```
Toast.makeText(MainActivity.this,radioButton.getText(),Toast.LENGTH_SHORT).show();  
    }  
}  
});  
clear.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View view) {  
        radioGroup.clearCheck();  
    }  
});  
}  
}
```

## OUTPUT:

The image consists of two vertically stacked screenshots of a mobile application interface. Both screenshots show a dark-themed screen with white text and light-colored buttons.

**Screenshot 1 (Top):**

- Header: "Radio Button" and "Select Your Subject?"
- List of options:
  - DBMS
  - C/C++ programming
  - Data Structure
  - Algorithm
- Buttons: "CLEAR" and "SUBMIT"

**Screenshot 2 (Bottom):**

- Header: "Radio Button" and "Select Your Subject?"
- List of options:
  - DBMS
  - C/C++ programming
  - Data Structure
  - Algorithm
- Buttons: "CLEAR" and "SUBMIT"
- Feedback message at the bottom: "DBMS" with a small green icon.

## EX.NO.:04

## IMAGE BUTTON

### XML:

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <ImageButton
        android:id="@+id/imageButton"
        android:layout_width="294dp"
        android:layout_height="171dp"
        android:layout_marginLeft="70dp"
        android:layout_marginTop="200dp"
        android:layout_marginRight="70dp"
        android:scaleType="fitCenter"
        tools:ignore="SpeakableTextPresentCheck"
        tools:src= "@drawable/enter" />

</RelativeLayout>
```

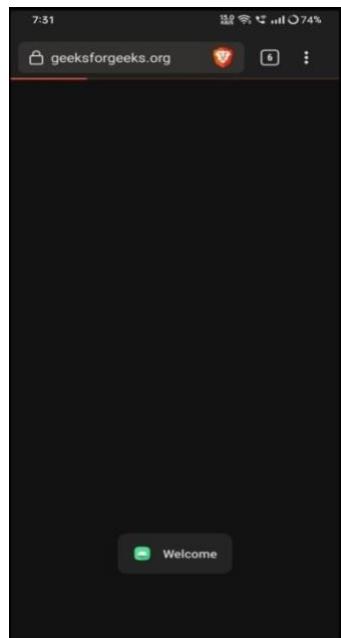
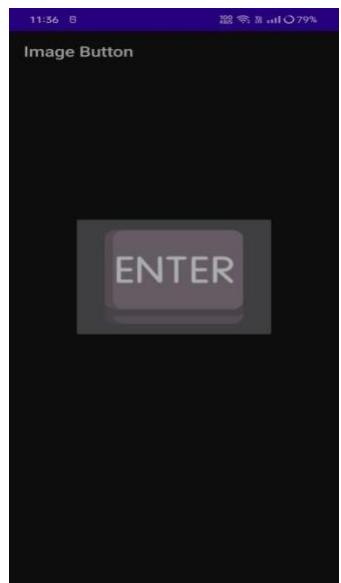
### JAVA:

```
package com.test.imagebutton;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.content.Intent;
import android.net.Uri;
import android.view.View;
import android.widget.ImageButton;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    ImageButton gfg;
```

```
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    gfg=(ImageButton) findViewById(R.id.imageButton);
    gfg.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            Toast.makeText(MainActivity.this,"Welcome",Toast.LENGTH_SHORT).show();
            String url="https://www.geeksforgeeks.org/";
            Intent i=new Intent(Intent.ACTION_VIEW);
            i.setData(Uri.parse(url));
            startActivity(i);
        }
    });
}
}
```

## OUTPUT:



## EX.NO.:05

## ALERT

### XML:

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="180dp"
        android:gravity="center_horizontal"
        android:text="Press The Back Button of Your Phone."
        android:textSize="30dp"
        android:textStyle="bold" />

</RelativeLayout>
```

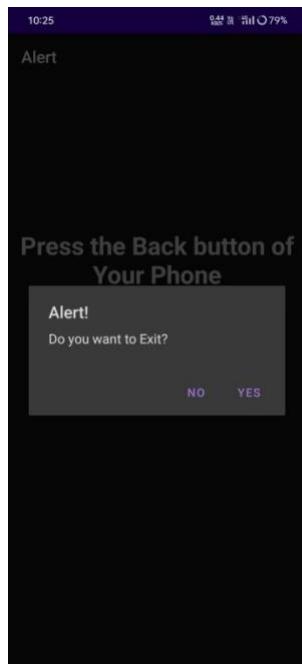
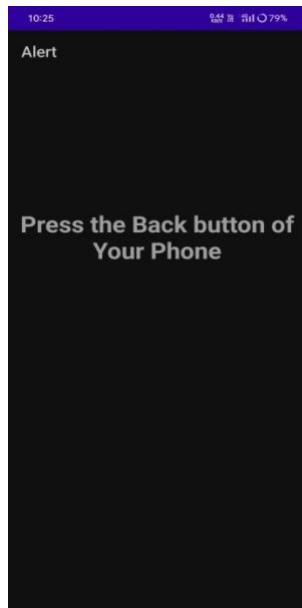
### JAVA:

```
package com.example.alert;
import androidx.appcompat.app.AppCompatActivity;
import android.app.AlertDialog;
import android.content.DialogInterface;
import android.os.Bundle;

public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void onBackPressed() {
        AlertDialog.Builder builder = new AlertDialog.Builder(MainActivity.this);
        builder.setMessage("Do you want to exit ?");
    }
}
```

```
builder.setTitle("Alert !");
builder.setCancelable(false);
builder.setPositiveButton("Yes", new DialogInterface.OnClickListener() {
    @Override
    public void onClick(DialogInterface dialog, int which) {
        finish();
    }
});
builder.setNegativeButton("No", new DialogInterface.OnClickListener() {
    @Override
    public void onClick(DialogInterface dialog, int which) {
        dialog.cancel();
    }
});
AlertDialog alertDialog = builder.create();
alertDialog.show();
}
}
```

## OUTPUT:



## EX.NO.:06

## LAYOUT MANAGER

### XML:

#### **activity\_main.xml:**

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="100dp">
        <TextView
            android:id="@+id/textView"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_margin="30dp"
            android:text="Details Form"
            android:textSize="25sp"
            android:gravity="center"/>
    </LinearLayout>

    <GridLayout
        android:id="@+id/gridLayout"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:layout_marginTop="100dp"
        android:layout_marginBottom="200dp"
        android:columnCount="2"
        android:rowCount="3">
        <TextView
            android:id="@+id/textView1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_margin="10dp"
            android:layout_row="0"
```

```
    android:layout_column="0"
    android:text="Name"
    android:textSize="20sp"
    android:gravity="center"/>

<EditText
    android:id="@+id/editText"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:layout_row="0"
    android:layout_column="1"
    android:ems="10"/>

<TextView
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:layout_row="1"
    android:layout_column="0"
    android:text="Reg.No"
    android:textSize="20sp"
    android:gravity="center"/>

<EditText
    android:id="@+id/editText2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:layout_row="1"
    android:layout_column="1"
    android:inputType="number"
    android:ems="10"/>

<TextView
    android:id="@+id/textView3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
```

```
    android:layout_row="2"
    android:layout_column="0"
    android:text="Dept"
    android:textSize="20sp"
    android:gravity="center"/>

<Spinner
    android:id="@+id/spinner"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:layout_row="2"
    android:layout_column="1"
    android:spinnerMode="dropdown"/>

</GridLayout>

<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentBottom="true"
    android:layout_centerInParent="true"
    android:layout_marginBottom="150dp"
    android:text="Submit"/>

</RelativeLayout>
```

#### **activity\_second.xml:**

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context="com.example.devang.exno2.SecondActivity"
    android:orientation="vertical"
    android:gravity="center">

<TextView
    android:id="@+id/textView1"
```

```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="20dp"
    android:text="New Text"
    android:textSize="30sp"/>

<TextView
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="20dp"
    android:text="New Text"
    android:textSize="30sp"/>

<TextView
    android:id="@+id/textView3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="20dp"
    android:text="New Text"
    android:textSize="30sp"/>

</LinearLayout>
```

### **Strings.xml:**

```
<resources>
    <string name="app_name">layoutmanager</string>
    <string-array name="dept">
        <item>BCA</item>
        <item>BSC</item>
        <item>B.com</item>
    </string-array>
</resources>
```

## **JAVA:**

### **MainActivity.java:**

```
package com.example.layoutmanager;

import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Spinner;

public class MainActivity extends AppCompatActivity {

    EditText name, reg;
    Button bt;
    String s_name, s_reg,dept;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        Spinner spinner = findViewById(R.id.spinner);
        ArrayAdapter<CharSequence> adapter = ArrayAdapter.createFromResource(this,
        R.array.dept, android.R.layout.simple_spinner_item);
        adapter.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
        spinner.setAdapter(adapter);
        bt = findViewById(R.id.button);
        name = findViewById(R.id.editText);
        reg = findViewById(R.id.editText2);
        bt.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                s_name = name.getText().toString();
                s_reg = reg.getText().toString();
                dept=spinner.getSelectedItem().toString();
            }
        });
    }
}
```

```
Intent i=new Intent(MainActivity.this,SecondActivity.class);
i.putExtra("name_key",s_name);
i.putExtra("reg_key",s_reg);
i.putExtra("dep_key",dept);
startActivity(i);

}
});
```

## **SecondActivity.java:**

```
package com.example.exno2;
import android.content.Intent;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.TextView;
public class SecondActivity extends AppCompatActivity {
    TextView t1,t2,t3;
    String name,reg,dept;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_second);
        t1= (TextView) findViewById(R.id.textView1);
        t2= (TextView) findViewById(R.id.textView2);
        t3= (TextView) findViewById(R.id.textView3);
        //Getting the Intent
        Intent i = getIntent();
        //Getting the Values from First Activity using the Intent received
        name=i.getStringExtra("name_key");
        reg=i.getStringExtra("reg_key");
        dept=i.getStringExtra("dept_key");
        t1.setText(name);
        t2.setText(reg);
        t3.setText(dept);
    }
}
```

## OUTPUT:

The image consists of two vertically stacked screenshots of a mobile application interface.

**Screenshot 1 (Top): Details Form**

This screenshot shows a "Details Form" screen. At the top, there is a header bar with the text "layoutmanager". Below the header, the title "Details Form" is centered. The form contains three fields:

- Name: Harry
- Reg.No: 1001
- Dept: BCA

A blue "SUBMIT" button is located at the bottom center of the form.

**Screenshot 2 (Bottom): Result Screen**

This screenshot shows the results of the form submission. It features a header bar with the text "layoutmanager" and a timestamp "11:53 8". The main content area displays the submitted data in a list format:

- Harry
- 1001
- BCA

**EX.NO.:07****AUDIO MODE****XML:**

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="ringer app"
        android:textSize="16sp"/>

    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/textView1"
        android:layout_marginTop="15dp"
        android:layout_toRightOf="@+id/textView1"
        android:text="silent" />

    <Button
        android:id="@+id/button2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/button1"
        android:layout_marginTop="98dp"
        android:text="vibrate" />

    <Button
        android:id="@+id/button3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/button2"
        android:layout_below="@+id/button2"
```

```
    android:layout_marginTop="30dp"
    android:text="ringer" />

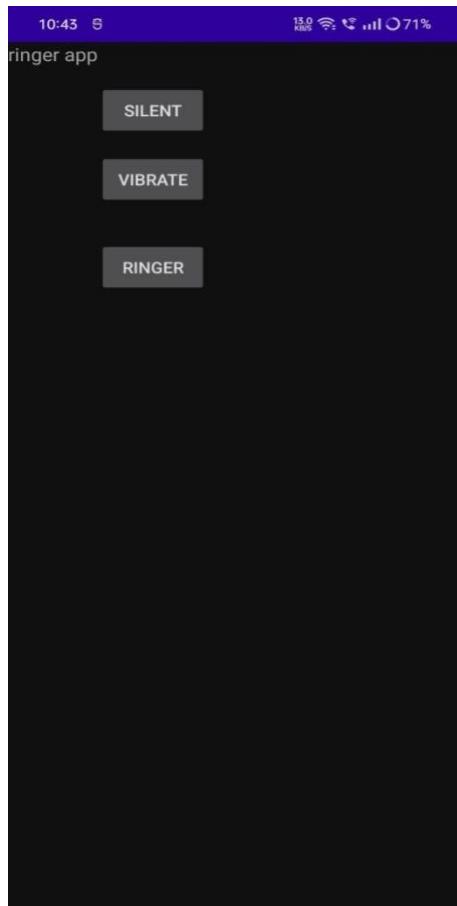
</RelativeLayout>
```

## **JAVA:**

```
package com.example.audiomode;
import android.media.AudioManager;
import android.os.Bundle;
import android.provider.MediaStore.Audio;
import android.app.Activity;
import android.content.Context;
import android.view.Menu;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
public class MainActivity extends Activity {
    Button b1, b2, b3;
    AudioManager am;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        b1 = (Button) findViewById(R.id.button1);
        b2 = (Button) findViewById(R.id.button2);
        b3 = (Button) findViewById(R.id.button3);
        am = (AudioManager) getSystemService(Context.AUDIO_SERVICE);
        b1.setOnClickListener(new OnClickListener() {
            @Override
            public void onClick(View v) {
                am.setRingerMode(0);
            }
        });
        b2.setOnClickListener(new OnClickListener() {
            @Override
            public void onClick(View v) {
                am.setRingerMode(1);
            }
        });
        b3.setOnClickListener(new OnClickListener() {
```

```
@Override  
public void onClick(View v) {  
    am.setRingerMode(2);  
}  
});  
}  
}
```

## OUTPUT:



**EX.NO.:08****SMS****XML:**

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:orientation="vertical"
    android:layout_marginTop="140dp"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <EditText
        android:id="@+id/editText"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="Enter number"
        android:inputType="textPersonName" />

    <EditText
        android:id="@+id/editText2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="Enter message"
        android:inputType="textPersonName" />

    <Button
        android:id="@+id/button"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="20dp"
        android:layout_marginLeft="60dp"
        android:layout_marginRight="60dp"
        android:text="SEND" />

</LinearLayout>
```

## **JAVA:**

```
package com.example.sms;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.telephony.SmsManager;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

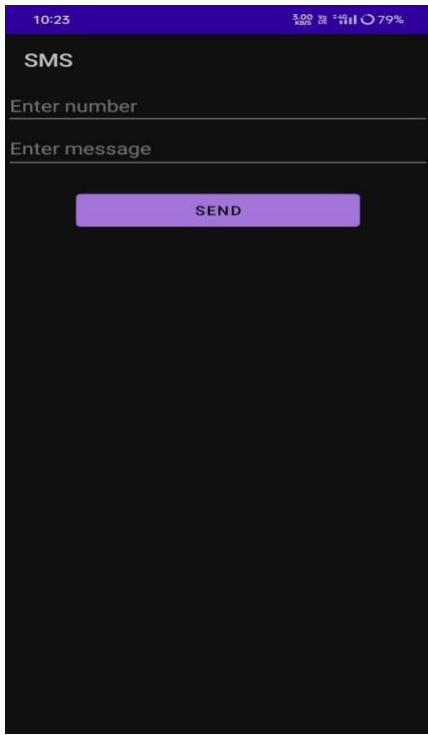
public class MainActivity extends AppCompatActivity {
    EditText phonenumbers,message;
    Button send;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        send=findViewById(R.id.button);
        phonenumbers=findViewById(R.id.editText);
        message=findViewById(R.id.editText2);
        send.setOnClickListener(new View.OnClickListener() {
            public void onClick(View view) {
                String number=phonenumbers.getText().toString();
                String msg=message.getText().toString();
                try {
                    SmsManager smsManager=SmsManager.getDefault();
                    smsManager.sendTextMessage(number,null,msg,null,null);
                    Toast.makeText(getApplicationContext(),"Message
Sent",Toast.LENGTH_LONG).show();
                }catch (Exception e)
                {
                    Toast.makeText(getApplicationContext(),"Some fields is
Empty",Toast.LENGTH_LONG).show();
                }
            }
        });
    }
}
```

## ANDROIDMANIFEST.XML

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:dist="http://schemas.android.com/apk/distribution"
    package="com.example.sms">
    <uses-permission android:name="android.permission.SEND_SMS"/>
    <dist:module dist:instant="true" />
    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/AppTheme">
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category
                    android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>

</manifest>
```

## **OUTPUT:**



**EX.NO.:09**

**EMAIL**

**XML:**

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <EditText
        android:id="@+id/editText1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_alignParentRight="true"
        android:layout_marginTop="18dp"
        android:layout_marginRight="22dp"
        android:minWidth="48dp"
        android:minHeight="48dp"
        tools:ignore="SpeakableTextPresentCheck" />
    <EditText
        android:id="@+id/editText2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/editText1"
        android:layout_alignLeft="@+id/editText1"
        android:layout_marginTop="20dp"
        android:minWidth="48dp"
        android:minHeight="48dp"
        tools:ignore="SpeakableTextPresentCheck" />
    <EditText
        android:id="@+id/editText3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/editText2"
        android:layout_alignLeft="@+id/editText2"
        android:layout_marginTop="30dp"
```

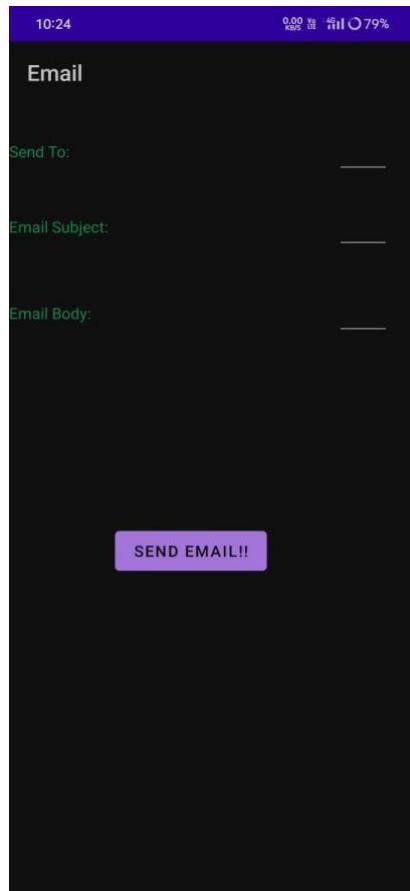
```
    android:minWidth="48dp"
    android:minHeight="48dp"
    tools:ignore="SpeakableTextPresentCheck" />
<TextView
    android:id="@+id/textView1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignBaseline="@+id/editText1"
    android:layout_alignBottom="@+id/editText1"
    android:layout_alignParentLeft="true"
    android:text="Send To:"
    android:textColor="#0F9D58" />
<TextView
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignBaseline="@+id/editText2"
    android:layout_alignBottom="@+id/editText2"
    android:layout_alignParentLeft="true"
    android:text="Email Subject:"
    android:textColor="#0F9D58" />
<TextView
    android:id="@+id/textView3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignBaseline="@+id/editText3"
    android:layout_alignBottom="@+id/editText3"
    android:text="Email Body:"
    android:textColor="#0F9D58" />
<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/editText3"
    android:layout_marginTop="168dp"
    android:layout_centerHorizontal="true"
    android:text="Send email!!" />
</RelativeLayout>
```

## **JAVA:**

```
package com.example.email;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import androidx.appcompat.app.AppCompatActivity;
public class MainActivity extends AppCompatActivity {
    Button button;
    EditText sendto, subject, body;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        sendto = findViewById(R.id.editText1);
        subject = findViewById(R.id.editText2);
        body = findViewById(R.id.editText3);
        button = findViewById(R.id.button);

        button.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String emailsend = sendto.getText().toString();
                String emailsubject = subject.getText().toString();
                String emailbody = body.getText().toString();
                Intent intent = new Intent(Intent.ACTION_SEND);
                intent.putExtra(Intent.EXTRA_EMAIL, new String[]{emailsend});
                intent.putExtra(Intent.EXTRA_SUBJECT, emailsubject);
                intent.putExtra(Intent.EXTRA_TEXT, emailbody);
                intent.setType("message/rfc822");
                startActivity(Intent.createChooser(intent, "Choose an Email client :"));
            }
        });
    }
}
```

## OUTPUT:



**EX.NO.:10****MOBILE CALLS****XML:**

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <EditText
        android:id="@+id/editText"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="30dp"
        tools:ignore="SpeakableTextPresentCheck,TouchTargetSizeCheck" />

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="115dp"
        android:padding="5dp"
        android:text="Make Call!!" />

</RelativeLayout>
```

## **JAVA:**

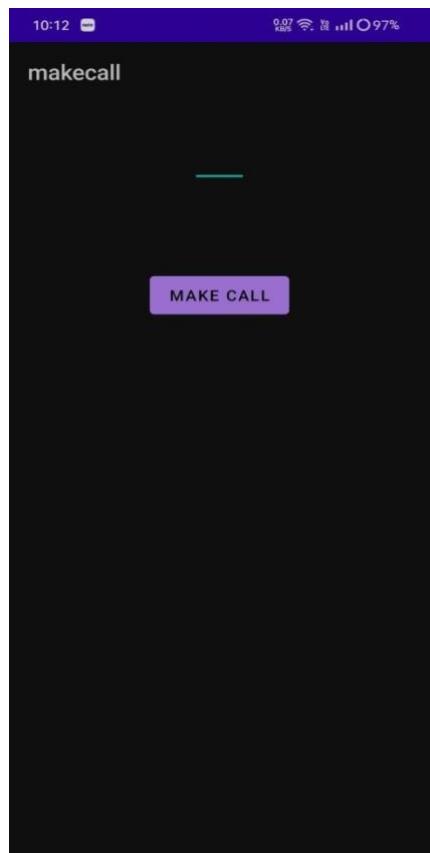
```
package com.example.mobilecalls;
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
    EditText edittext;
    Button button;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        button = findViewById(R.id.button);
        edittext = findViewById(R.id.editText);

        button.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String phone_number = edittext.getText().toString();
                Intent phone_intent = new Intent(Intent.ACTION_CALL);
                phone_intent.setData(Uri.parse("tel:" + phone_number));
                startActivity(phone_intent);

            }
        });
    }
}
```

## **OUTPUT:**



**EX.NO.:11****STUDENT MARKSHEET****XML:**

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity"
    android:orientation="vertical"
    android:gravity="center">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        android:gravity="center">

        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:orientation="vertical"
            android:gravity="center">

            <TextView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:layout_marginBottom="30sp"
                android:gravity="center"
                android:text="@string/emptitle"
                android:textSize="15dp"
                android:textStyle="bold"
                android:textColor="@color/colorPrimary"
                />

            <ImageView
                android:layout_width="200sp"
                android:layout_height="100sp"
```

```
    android:gravity="center"
    android:src="@drawable/marks" />

</LinearLayout>

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    android:gravity="center" >

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="20sp"
        android:text="@string/stname"
        android:textSize="15sp"
        android:textStyle="italic"
        android:textColor="@color/colorAccent"/>

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/stname"
        android:textColor="@color/colorPrimary"
        android:gravity="center"/>

</LinearLayout>

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    android:gravity="center" >

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="15sp"
        android:text="@string/marks1"
```

```
    android:textSize="15sp"
    android:textStyle="italic"
    android:textColor="@color/colorAccent"/>\\>

<EditText
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:id="@+id/mark1"
    android:textColor="@color/colorPrimary"
    android:gravity="center" />

</LinearLayout>

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    android:gravity="center">

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginLeft="15sp"
    android:text="@string/marks2"
    android:textSize="15sp"
    android:textStyle="italic"
    android:textColor="@color/colorAccent"/>

<EditText
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:id="@+id/mark2"
    android:textColor="@color/colorPrimary"
    android:gravity="center"/>

</LinearLayout>

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
```

```
    android:orientation="horizontal"
    android:gravity="center">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="20sp"
        android:text="@string/marks3"
        android:textSize="15sp"
        android:textStyle="italic"
        android:textColor="@color/colorAccent"/>

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/mark3"
        android:textColor="@color/colorPrimary"
        android:gravity="center" />

</LinearLayout>

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    android:gravity="center">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="20sp"
        android:text="@string/total"
        android:textSize="15sp"
        android:textStyle="italic"
        android:textColor="@color/colorAccent"/>

    <EditText
        android:id="@+id/total"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
```

```
    android:gravity="center"
    android:textColor="@color/colorPrimary"/>

</LinearLayout>

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    android:gravity="center" >

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="20sp"
        android:text="@string/avg"
        android:textSize="15sp"
        android:textStyle="italic"
        android:textColor="@color/colorAccent"/>

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/avg"
        android:textColor="@color/colorPrimary"
        android:gravity="center"/>

</LinearLayout>
```

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    android:gravity="center">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="20sp"
```

```
        android:text="@string/grade"
        android:textSize="15sp"
        android:textStyle="italic"
        android:textColor="@color/colorAccent"/>

    <EditText
        android:id="@+id/grade"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="center"
        android:textColor="@color/colorPrimary"/>

</LinearLayout>

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    android:gravity="right">

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/btnok"
        android:textColor="#ffffff"
        android:background="@color/colorPrimary"
        android:id="@+id	btn1"/>

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/btnclear"
        android:textColor="#ffffff"
        android:background="@color/colorAccent"
        android:id="@+id	btn2" />

</LinearLayout>
</LinearLayout>
```

### **Colors.XML:**

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <color name="colorPrimary">#008577</color>
    <color name="colorPrimaryDark">#00574B</color>
    <color name="colorAccent">#D81B60</color>
</resources>
```

### **Strings.xml:**

```
<resources>
    <string name="app_name">Student Marks Calculation System</string>
    <string name="emptitle">Student Marks Calculation System</string>
    <string name="stname">Student Name</string>
    <string name="marks1">Marks 1</string>
    <string name="marks2">Marks 2</string>
    <string name="marks3">Marks 3</string>
    <string name="total">Total</string>
    <string name="avg">Average</string>
    <string name="grade">Grade</string>
    <string name="btnok">Ok</string>
    <string name="btnclear">Clear</string>
</resources>
```

### **Style.xml:**

```
<style name="AppTheme" parent="Theme.AppCompat.Light.DarkActionBar">
    <!-- Customize your theme here. -->
    <item name="colorPrimary">@color/colorPrimary</item>
    <item name="colorPrimaryDark">@color/colorPrimaryDark</item>
    <item name="colorAccent">@color/colorAccent</item>
</style>
```

## **JAVA CODE:**

```
package com.example.kobinath.myapplication;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

public class MainActivity extends AppCompatActivity {
    EditText ed1,ed2,ed3,ed4,ed5,ed6,ed7;
    Button btn1,btn2;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        ed1 = findViewById(R.id.stname);
        ed2 = findViewById(R.id.mark1);
        ed3 = findViewById(R.id.mark2);
        ed4 = findViewById(R.id.mark3);
        ed5 = findViewById(R.id.total);
        ed6 = findViewById(R.id.avg);
        ed7 = findViewById(R.id.grade);
        btn1 = findViewById(R.id.btn1);
        btn2 = findViewById(R.id.btn2);
        btn1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                stmarks();
            }
        });
        btn2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                clear();
            }
        });
    }
}
```

```
public void stmarks()
{
    int m1,m2,m3,tot;
    double avg;
    String grade;
    m1 = Integer.parseInt(ed2.getText().toString());
    m2 = Integer.parseInt(ed3.getText().toString());
    m3 = Integer.parseInt(ed4.getText().toString());
    tot = m1 + m2 + m3;
    ed5.setText(String.valueOf(tot));
    avg = tot/3;
    ed6.setText(String.valueOf(avg));

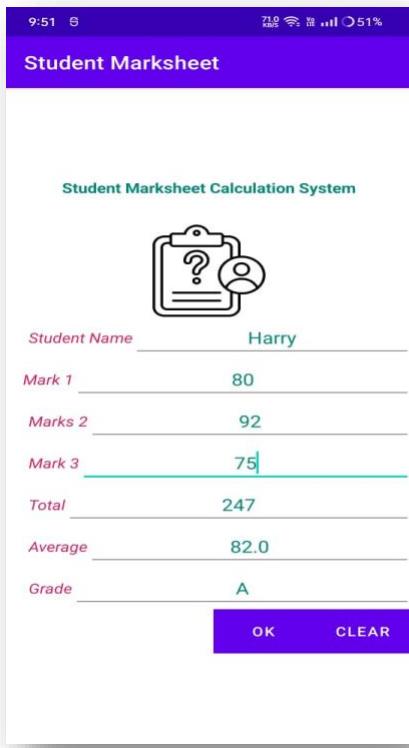
    if(avg > 75)
    {
        ed7.setText("A");
    }
    else if(avg > 65)
    {
        ed7.setText("B");
    }
    else if(avg > 55)
    {
        ed7.setText("C");
    }
    else if(avg > 40)
    {
        ed7.setText("S");
    }
    else
    {
        ed7.setText("Fail");
    }
}

public void clear()
{
    ed1.setText("");
    ed2.setText("");
    ed3.setText("");
}
```

```
    ed4.setText("");
    ed5.setText("");
    ed6.setText("");
    ed7.setText("");
    ed1.requestFocus();

}
```

## OUTPUT:



**EX.NO.:12****LOGIN WITH DATABASE****XML:**

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.v4.widget.NestedScrollView
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/nestedScrollView"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@color/colorBackground"
    android:paddingBottom="20dp"
    android:paddingLeft="20dp"
    android:paddingRight="20dp"
    android:paddingTop="20dp"
    tools:context=".activities.LoginActivity">
    <android.support.v7.widget.LinearLayoutCompat
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical">
        <android.support.v7.widget.AppCompatImageView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_gravity="center_horizontal"
            android:layout_marginTop="40dp"
            android:src="@drawable/logo" />
        <android.support.design.widget.TextInputLayout
            android:id="@+id/textInputLayoutEmail"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_marginTop="40dp">
            <android.support.design.widget.TextInputEditText
                android:id="@+id/textInputEditTextEmail"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:hint="@string/hint_email"
                android:inputType="text"
                android:maxLines="1"
                android:textColor="@android:color/white" />
        </android.support.design.widget.TextInputLayout>
```

```
<android.support.design.widget.TextInputLayout
    android:id="@+id/textInputLayoutPassword"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="20dp">
    <android.support.design.widget.TextInputEditText
        android:id="@+id/textInputEditTextPassword"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="@string/hint_password"
        android:inputType="textPassword"
        android:maxLines="1"
        android:textColor="@android:color/white" />
</android.support.design.widget.TextInputLayout>
<android.support.v7.widget.AppCompatButton
    android:id="@+id/appCompatButtonLogin"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="40dp"
    android:background="@color/colorTextHint"
    android:text="@string/text_login" />
<android.support.v7.widget.AppCompatTextView
    android:id="@+id/textViewLinkRegister"
    android:layout_width="fill_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="30dp"
    android:gravity="center"
    android:text="@string/text_not_member"
    android:textSize="16dp" />
</android.support.v7.widget.LinearLayoutCompat>
</android.support.v4.widget.NestedScrollView>
```

## **JAVA:**

### **Create a User model class.**

```
package com.androidtutorialshub.loginregister.model;
public class User {
    private int id;
    private String name;
    private String email;
    private String password;
    public int getId() {
        return id;
    }
    public void setId(int id) {
        this.id = id;
    }
    public String getName() {
        return name;
    }
    public void setName(String name) {
        this.name = name;
    }
    public String getEmail() {
        return email;
    }
    public void setEmail(String email) {
        this.email = email;
    }
    public String getPassword() {
        return password;
    }
    public void setPassword(String password) {
        this.password = password;
    }
}
```

## **Create a DatabaseHelper class.**

```
package com.androidtutorialshub.loginregister.sql;
import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;
import com.androidtutorialshub.loginregister.model.User;
import java.util.ArrayList;
import java.util.List;
public class DatabaseHelper extends SQLiteOpenHelper {
    // Database Version
    private static final int DATABASE_VERSION = 1;
    // Database Name
    private static final String DATABASE_NAME = "UserManager.db";
    // User table name
    private static final String TABLE_USER = "user";
    // User Table Columns names
    private static final String COLUMN_USER_ID = "user_id";
    private static final String COLUMN_USER_NAME = "user_name";
    private static final String COLUMN_USER_EMAIL = "user_email";
    private static final String COLUMN_USER_PASSWORD = "user_password";
    // create table sql query
    private String CREATE_USER_TABLE = "CREATE TABLE " + TABLE_USER + "("
        + COLUMN_USER_ID + " INTEGER PRIMARY KEY AUTOINCREMENT," +
    COLUMN_USER_NAME + " TEXT,"
        + COLUMN_USER_EMAIL + " TEXT," + COLUMN_USER_PASSWORD + " TEXT"
    + ")";
    // drop table sql query
    private String DROP_USER_TABLE = "DROP TABLE IF EXISTS " + TABLE_USER;
    public DatabaseHelper(Context context) {
        super(context, DATABASE_NAME, null, DATABASE_VERSION);
    }
    @Override
    public void onCreate(SQLiteDatabase db) {
        db.execSQL(CREATE_USER_TABLE);
    }
    @Override
    public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion) {
        //Drop User Table if exist
```

```

        db.execSQL(DROP_USER_TABLE);
    // Create tables again
        onCreate(db);
    }
    public void addUser(User user) {
        SQLiteDatabase db = this.getWritableDatabase();
        ContentValues values = new ContentValues();
        values.put(COLUMN_USER_NAME, user.getName());
        values.put(COLUMN_USER_EMAIL, user.getEmail());
        values.put(COLUMN_USER_PASSWORD, user.getPassword());
    // Inserting Row
        db.insert(TABLE_USER, null, values);
        db.close();
    }

    public List<User> getAllUser() {
        // array of columns to fetch
        String[] columns = {
            COLUMN_USER_ID,
            COLUMN_USER_EMAIL,
            COLUMN_USER_NAME,
            COLUMN_USER_PASSWORD
        };
        // sorting orders
        String sortOrder =
            COLUMN_USER_NAME + " ASC";
        List<User> userList = new ArrayList<User>();
        SQLiteDatabase db = this.getReadableDatabase();
        Cursor cursor = db.query(TABLE_USER, //Table to query
            columns, //columns to return
            null, //columns for the WHERE clause
            null, //The values for the WHERE clause
            null, //group the rows
            null, //filter by row groups
            sortOrder); //The sort order
    // Traversing through all rows and adding to list
        if (cursor.moveToFirst()) {
            do {
                User user = new User();

```

```

        user.setId(Integer.parseInt(cursor.getString(cursor.getColumnIndex(COLUMN_USER_ID))));
        user.setName(cursor.getString(cursor.getColumnIndex(COLUMN_USER_NAME)));
        user.setEmail(cursor.getString(cursor.getColumnIndex(COLUMN_USER_EMAIL)));

    user.setPassword(cursor.getString(cursor.getColumnIndex(COLUMN_USER_PASSWORD)));
    // Adding user record to list
        userList.add(user);
    } while (cursor.moveToNext());
}
cursor.close();
db.close();
// return user list
return userList;
}

public void updateUser(User user) {
    SQLiteDatabase db = this.getWritableDatabase();
    ContentValues values = new ContentValues();
    values.put(COLUMN_USER_NAME, user.getName());
    values.put(COLUMN_USER_EMAIL, user.getEmail());
    values.put(COLUMN_USER_PASSWORD, user.getPassword());
    // updating row
    db.update(TABLE_USER, values, COLUMN_USER_ID + " = ?",
        new String[]{String.valueOf(user.getId())});
    db.close();
}

public void deleteUser(User user) {
    SQLiteDatabase db = this.getWritableDatabase();
    // delete user record by id
    db.delete(TABLE_USER, COLUMN_USER_ID + " = ?",
        new String[]{String.valueOf(user.getId())});
    db.close();
}

public boolean checkUser(String email) {
// array of columns to fetch
    String[] columns = {
        COLUMN_USER_ID
    };
    SQLiteDatabase db = this.getReadableDatabase();
    // selection criteria

```

```

String selection = COLUMN_USER_EMAIL + " = ?";
// selection argument
String[] selectionArgs = {email};
// query user table with condition
Cursor cursor = db.query(TABLE_USER, //Table to query
    columns, //columns to return
    selection, //columns for the WHERE clause
    selectionArgs, //The values for the WHERE clause
    null, //group the rows
    null, //filter by row groups
    null); //The sort order
int cursorCount = cursor.getCount();
cursor.close();
db.close();
if (cursorCount > 0) {
    return true;
}
return false;
}

public boolean checkUser(String email, String password) {
// array of columns to fetch
String[] columns = {
    COLUMN_USER_ID
};
SQLiteDatabase db = this.getReadableDatabase();
// selection criteria
String selection = COLUMN_USER_EMAIL + " = ?" + " AND " +
COLUMN_USER_PASSWORD + " = ?";
// selection arguments
String[] selectionArgs = {email, password};
// query user table with conditions
Cursor cursor = db.query(TABLE_USER, //Table to query
    columns, //columns to return
    selection, //columns for the WHERE clause
    selectionArgs, //The values for the WHERE clause
    null, //group the rows
    null, //filter by row groups
    null); //The sort order
int cursorCount = cursor.getCount();
cursor.close();

```

```
        db.close();
        if (cursorCount > 0) {
            return true;
        }
        return false;
    }
}
```

## **OUTPUT:**

